1652.69414 PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of	David A. Sharp	)
Serial No.:	10/766,417	)
Filed:	January 27, 2004	)
For:	BELT ALIGNMENT SYSTEM	)
Art Unit:	3651	)
Examiner:	Unassigned	)

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August 16, 2004 /Lawrence J. Crain/
Date *Attorney for Applicants*
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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CLAIM FOR PRIORITY

Sir:

Applicant claims foreign priority benefits under 35 U.S.C. § 119 on the basis of the foreign application identified below:

Canadian Patent Application No. 2,419,286, filed February 10, 2003.

A certified copy of the priority document is enclosed.

August 16, 2004

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La présente atteste que les documents ci-joints, dont la liste figure ci-dessous, sont des copies authentiques des documents déposés au Bureau des brevets.

Canadian Patent Office

Certification

This is to certify that the documents attached hereto and identified below are true copies of the documents on file in the Patent Office.

Specification and Drawings, as originally filed, with Application for Patent Serial No: **2,419,286,** on February 10, 2003, by **DAVID A. SHARP**, for "Sure Align Tracker".

CERTIFIED COPY OF PRIORITY DOCUMENT

Agent certificateur/Certifying Officer

January 27, 2004
Date

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Canada

(CIPO 68)

OPIC CIPO

SECIFICATIONS

1. This invention relates to aligning conveyor belt systems on both carrying side and return side off conveyor belt.
2. It is common in a tracking devise for conveyor belts to fail prematurely. Carry back material {material that has not been removed by belt scraper at conveyor discharge} may cause material build up under other types of tracking rollers. Under the return side tracking roller is the roller support and pivot mechanism. This carries back material build up, causes rollers and pivot mechanism to seize. Other tracking devises don't aligned conveyor belt until belt is way off line. It is of coarse necessary to provide a proper pivoting and simple aligning method eliminate roller damage and ensure effective and simple operation. The installation and alignment principles must be simple and effective.
3. I have found that these disadvantages may be overcome by providing a devise, which controls misalignment continuously with minimum force. The pivoting mechanism and roller support is clear of any carry back material from damaging equipment.

CLAIMS

The self aligning tracking assembly comprises of figure #1A troughing support bracket, figure #1B return side return bracket, figure #2 pivot assembly, figure #3 tracking control bar, figure#4 adjustable guide rollers, figure #5 tracking roller.

In figure #1A the troughing support bracket is installed to the topside of the conveyor stringer. Remove troughiing assembly and install support bracket.

In figure#1B the return side support brackets are installed to the under side of the conveyor stringers. Remove return roller and bolt support brackets to stringers. Be sure, brackets are mounted according to belt direction. (Refer to print if necessary).

The pivot assembly figure #2 is mounted on the support bracket and locked in place using lock nut.

The tracking control bar figure#3 is bolted to the pivot assembly torque arm, ensure to use washer between moving parts, to allow adequate movement.

In order to install tracking roller figure#5 it is necessary to raise the belt. Install tracking roller in slot provided on the pivot assembly.

Start conveyor belt, and adjust tracking control bar manually until belt is centrally aligned. Stop conveyor and ensure tracking roller is perpendicular to the belt. Install adjustable guide roller figure#4 in the slot provided in the tracking control bar. Adjust guide roller on both sides to within 1/4" of the belt. As the belt travels off centerline, the guide roller is activated, causing the pivot assembly to cause the tracking roller to pivot about the pivot axis to steer the belt back to its central position.

selfaligning troughing application

figure#1a

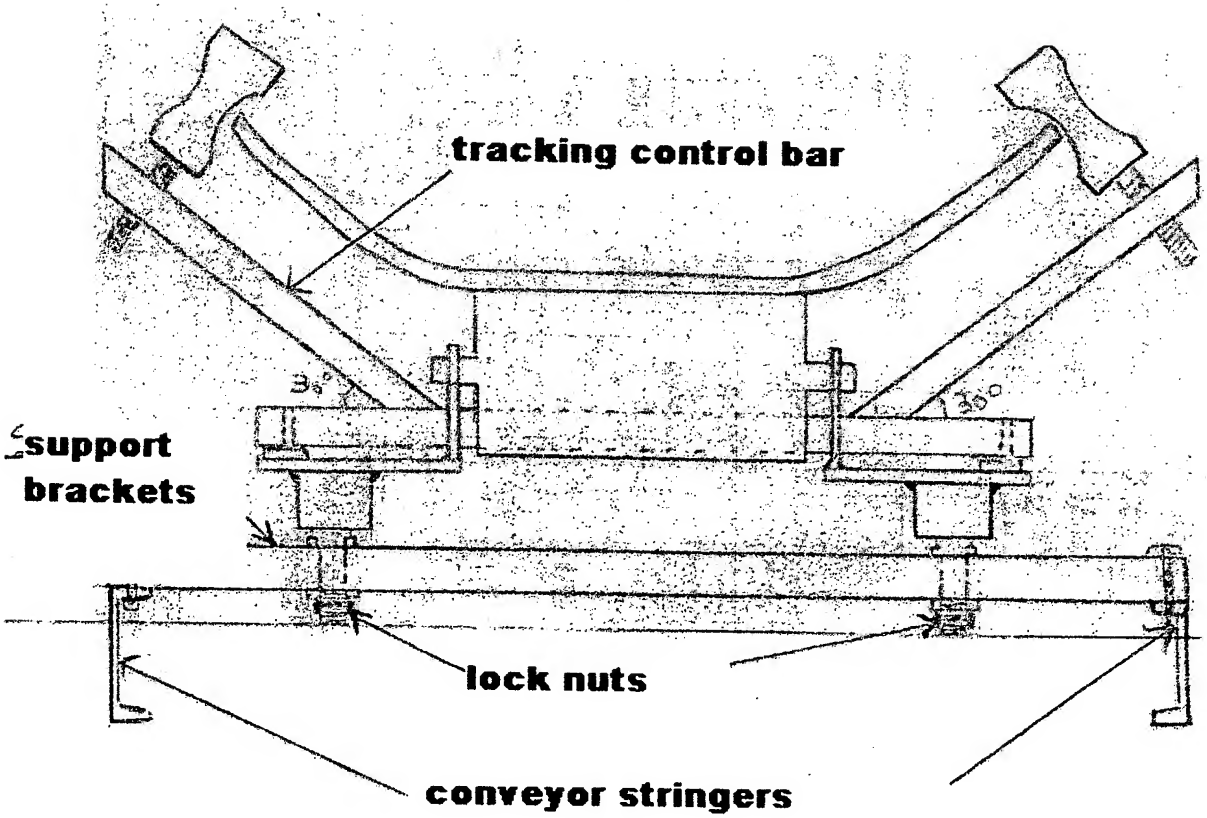


FIG 1B

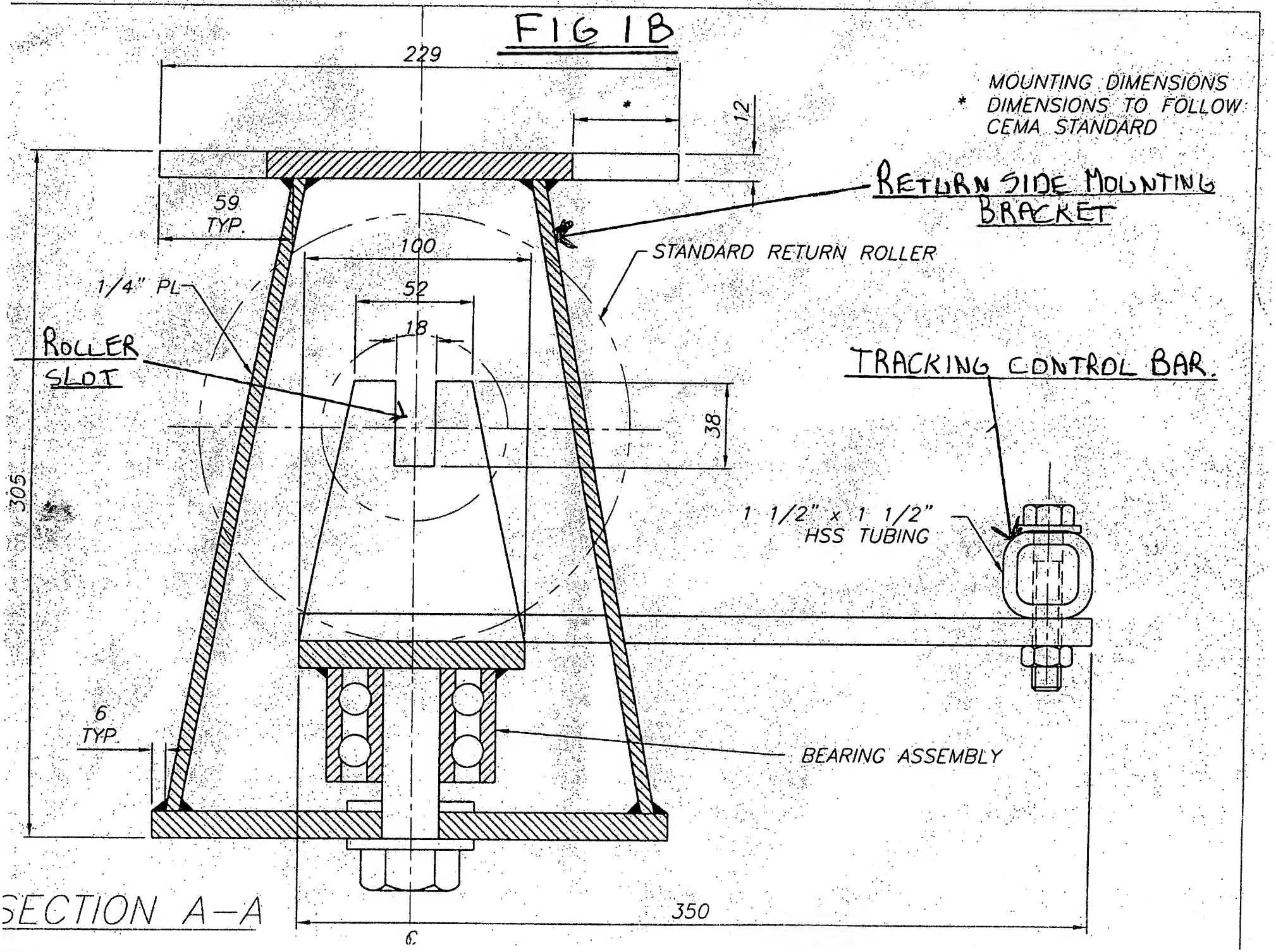
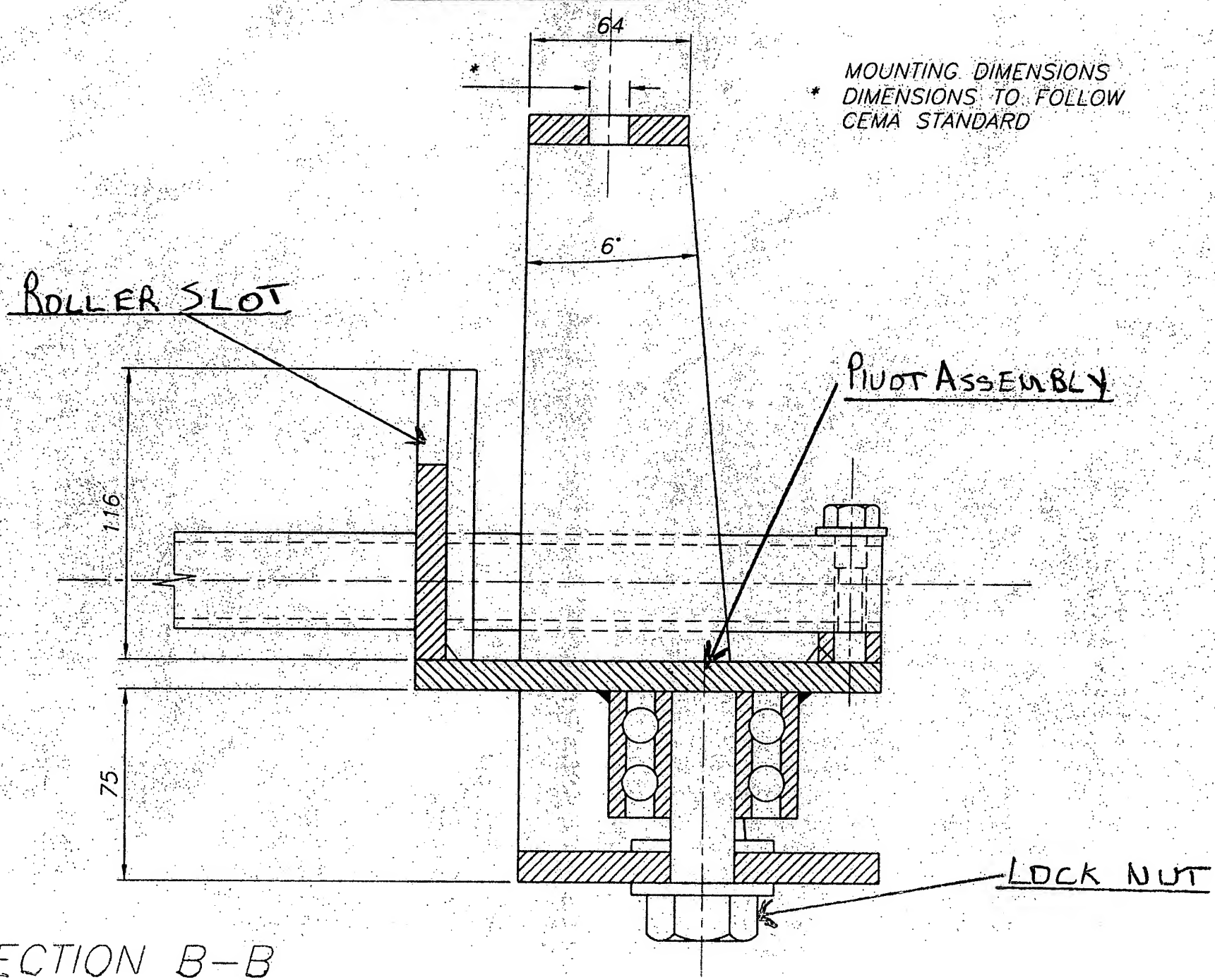


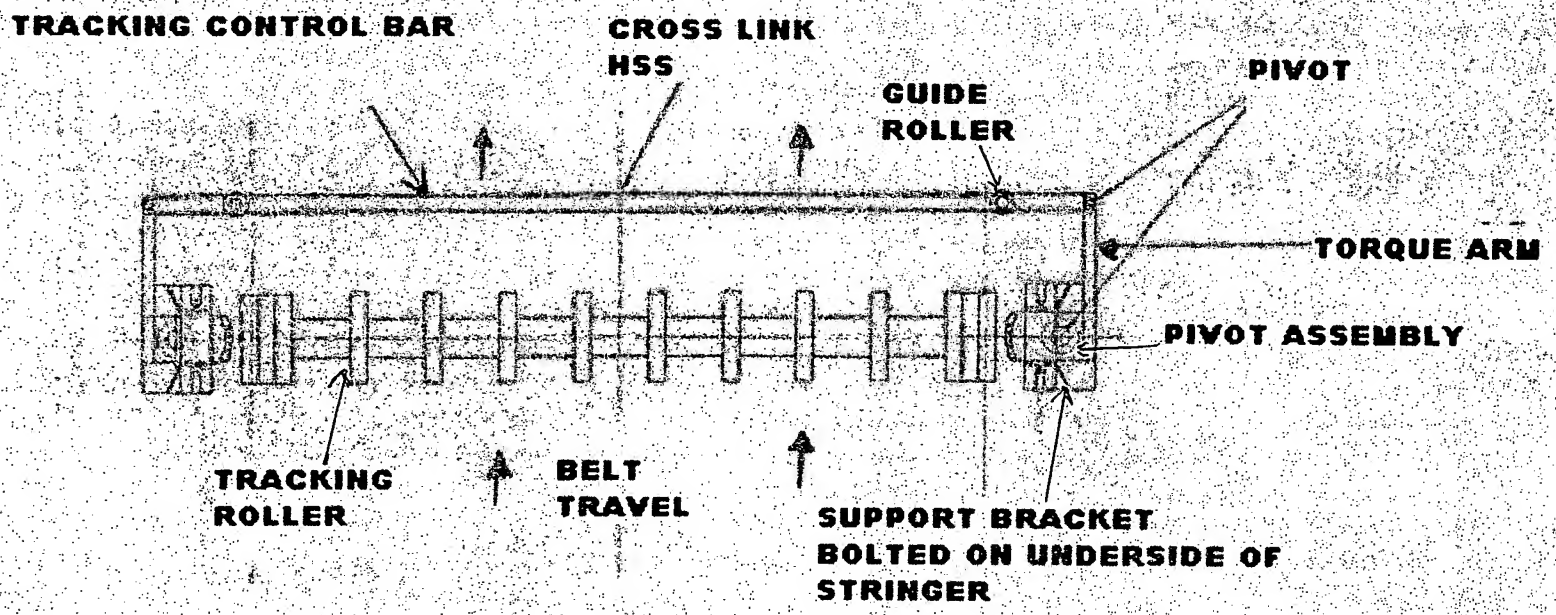
FIG #2



* MOUNTING DIMENSIONS
* DIMENSIONS TO FOLLOW CEMA STANDARD

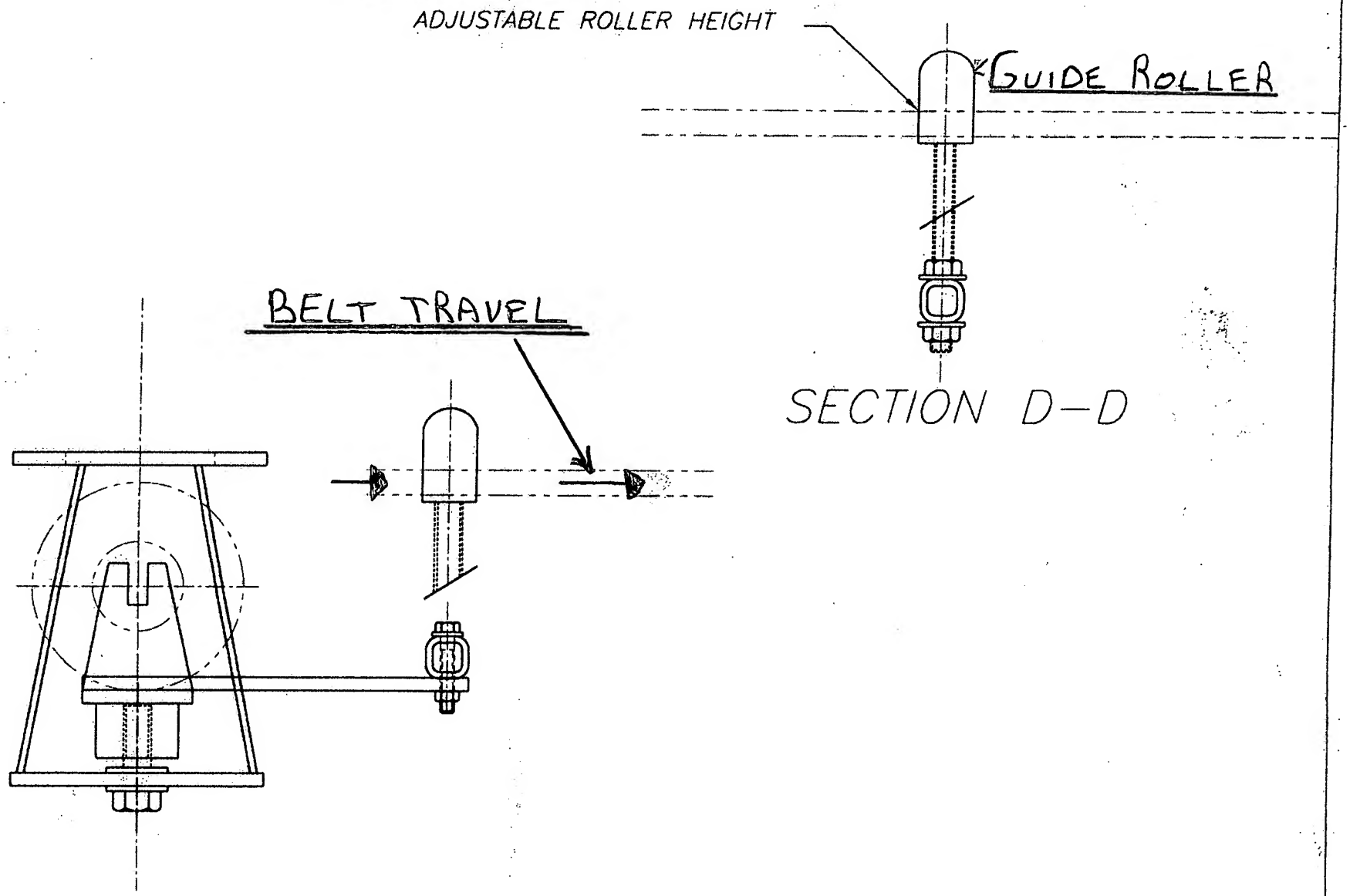
SECTION B–B

FIGURE#3



TOP VIEW

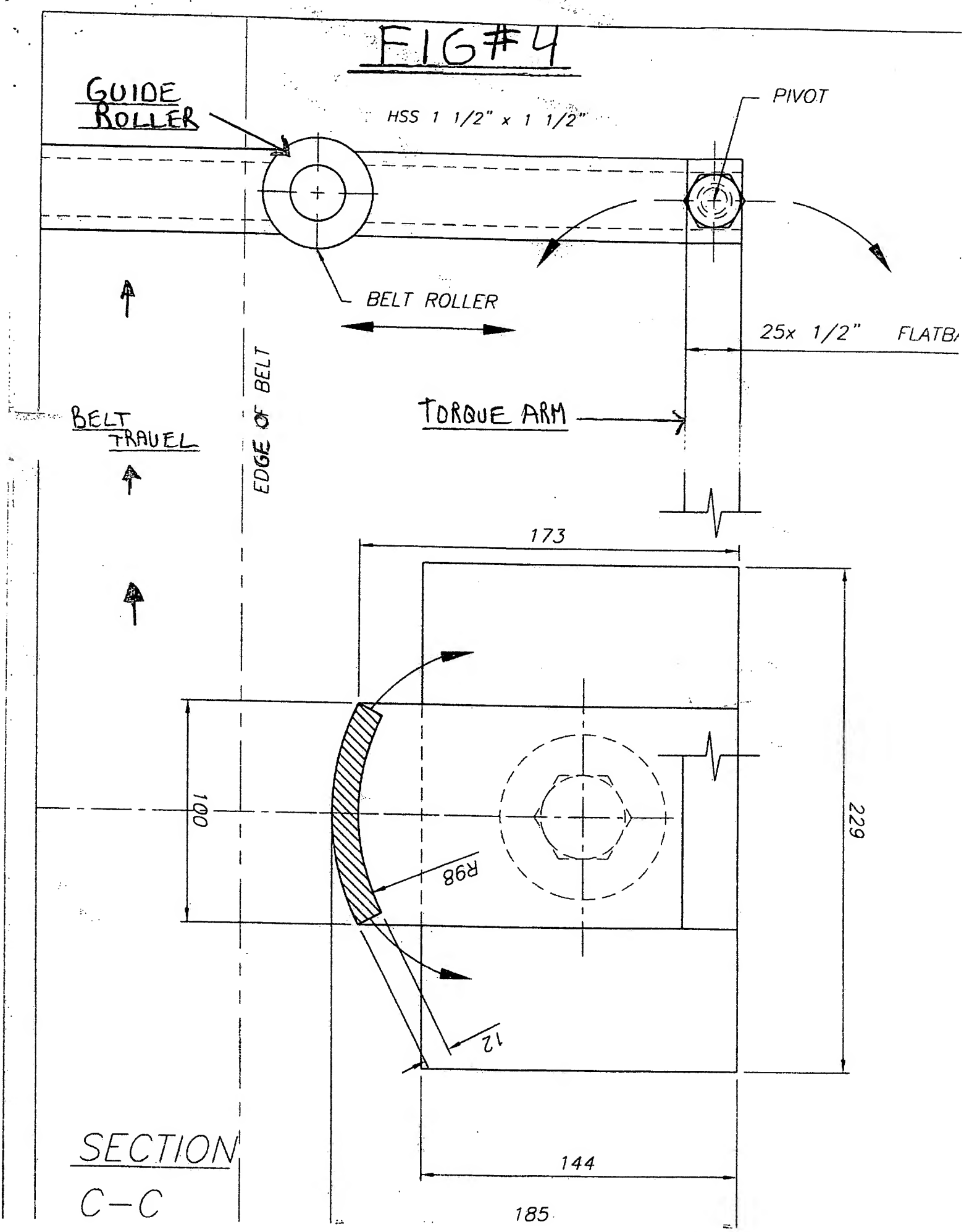
FIG. # 4



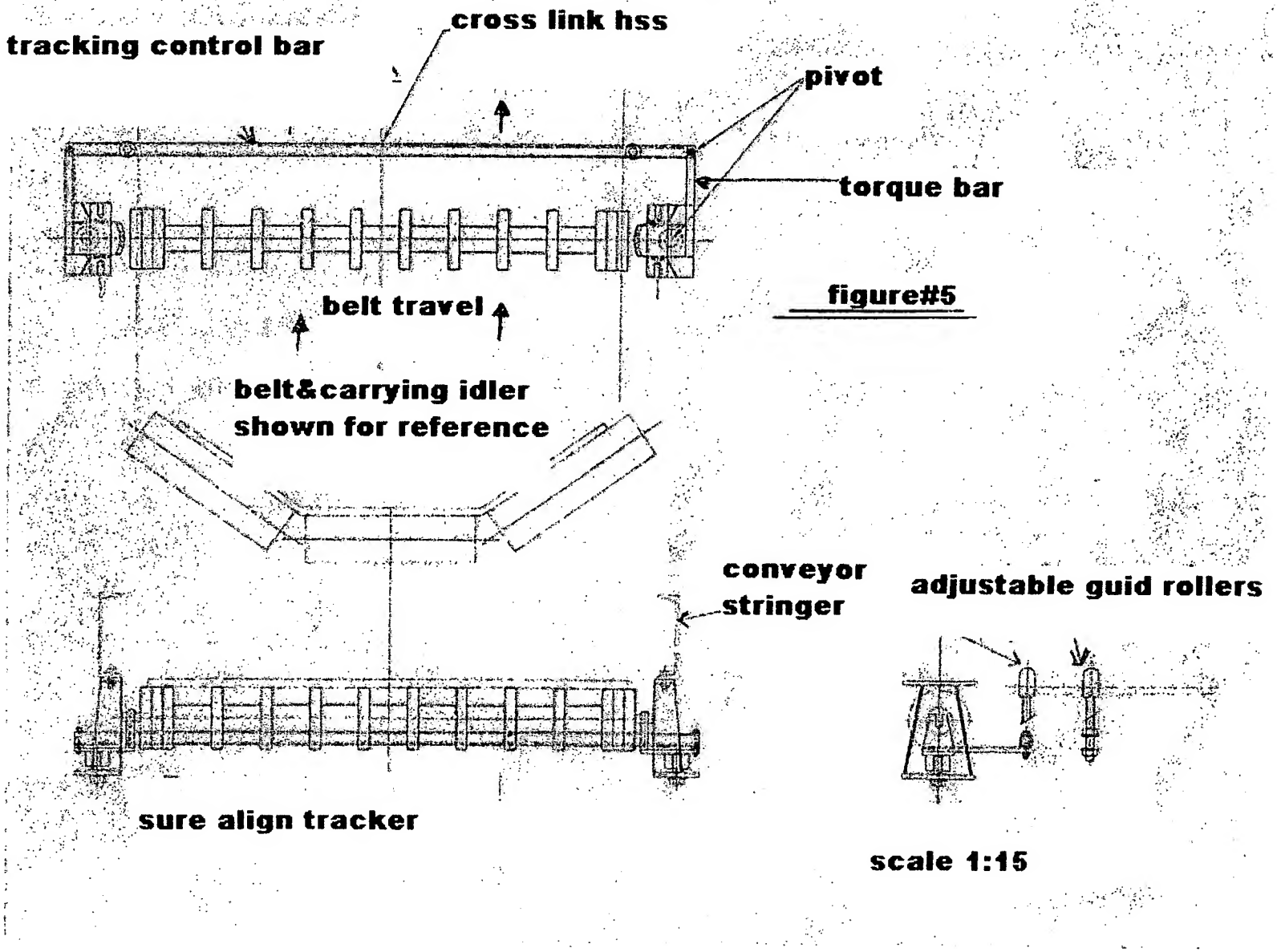
RIGHT SIDE VIEW RETURN SIDE

SCALE 1:5

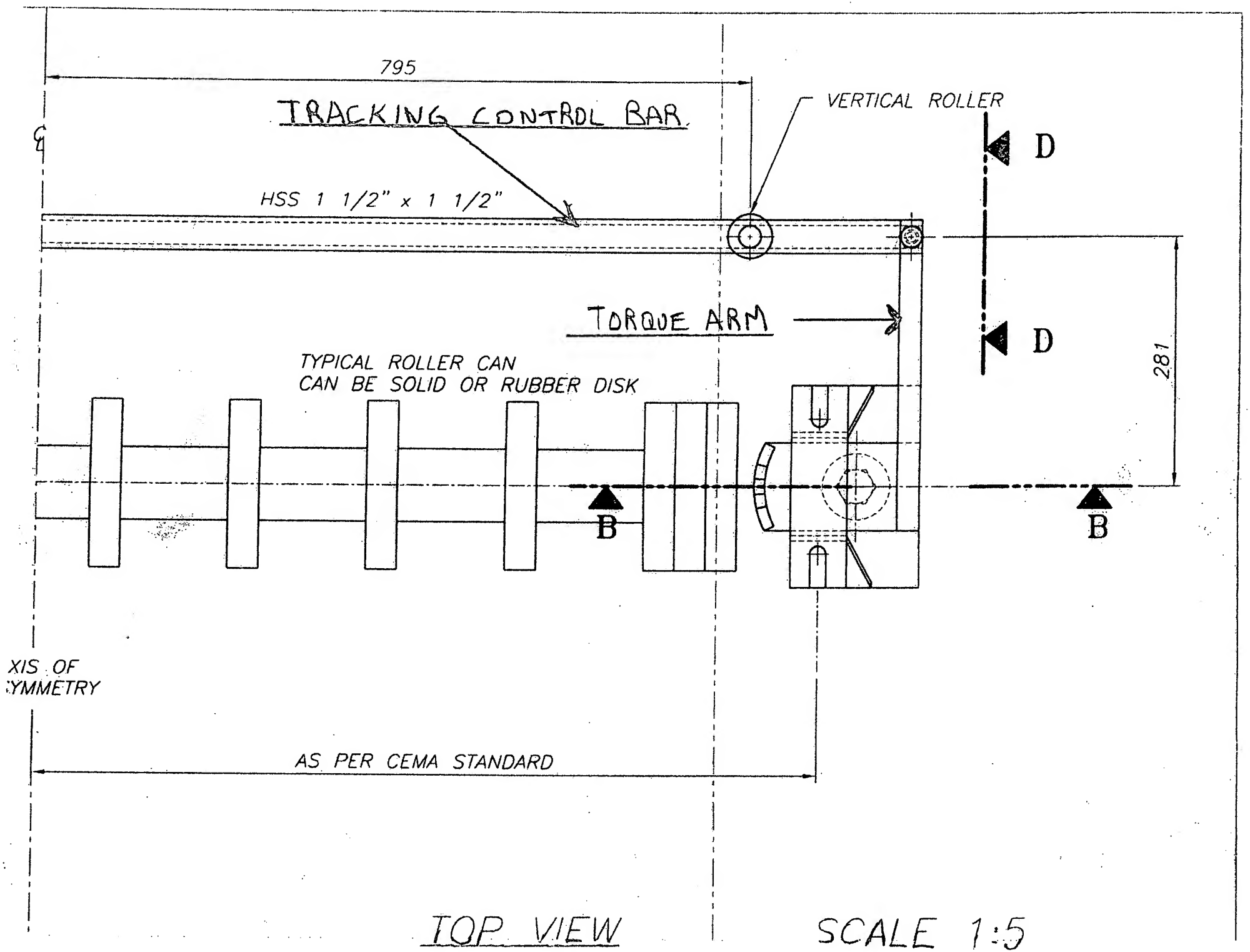
FIG#4



SECTION C–C


tracking control bar
cross link hss
pivot
torque bar
belt travel
belt&carrying idler
shown for reference
conveyor
stringer
adjustable guid rollers
sure align tracker
scale 1:15

figure#5



TOP VIEW

SCALE 1:5